METHOD AND DEVICE FOR GENERATING A SIGNAL WITH A FREQUENCY EQUAL TO THE PRODUCT OF A REFERENCE FREQUENCY AND A REAL NUMBER

Abstract of the Disclosure

A method for generating a signal with a frequency equal to a product of a reference frequency and a real number includes providing an output signal from an oscillator, and performing a first integer division of a frequency of the output signal by a first integer divider to obtain a first intermediate signal. A first measurement signal representative of a time difference between the first intermediate signal and a reference signal having the reference frequency is determined. The method further includes generating a first comparison signal derived from the first measurement signal, and generating a second comparison signal dependent on a period of the reference signal, on integer and decimal parts of the real number and on the first integer divider. The first and second comparison signals are compared to obtain an error signal representative of a time difference between a period of a current output signal and the period of the reference signal. The first integer division is deactivated to deliver an error signal to the input of the oscillator, with the output signal from the oscillator forming the desired signal with a frequency equal to the product of the reference frequency and the real number.